

C L A I M S

1.           An LED reflecting plate characterized by  
2 comprising:  
3           a plurality of lands each comprising a recess  
4 where an LED chip is to be mounted;  
5           a first bridging portion which connects said  
6 plurality of lands in series;  
7           a frame having a frame shape to surround said  
8 plurality of lands; and  
9           a second bridging portion which connects said  
10 frame to, of said plurality of lands, lands which are  
11 located at two ends,  
12           wherein said lands, said first bridging  
13 portion, said second bridging portion, and said frame  
14 are made of a metal.
2.           An LED reflecting plate according to claim 2,  
2 characterized in that each of said lands comprises  
3           a flat LED chip mounting portion which forms a  
4 bottom of the recess, and  
5           a reflecting portion which forms a side wall  
6 of the recess and is inclined with respect to said LED  
7 chip mounting portion.
3.           An LED reflecting plate according to claim 1,  
2 characterized in that said lands, said first bridging  
3 portion, said second bridging portion, and said frame  
4 are integrally formed of one metal plate.

4. An LED reflecting plate according to claim 1,  
2 characterized by comprising a plurality of groups of a  
3 plurality of lands which are connected by said first  
4 bridging portion.
5. An LED reflecting plate according to claim 2,  
2 characterized in that a space surrounded by said bottom  
3 and side wall of the recess of said land is  
4 frustoconical.
6. An LED reflecting plate according to claim 2,  
2 characterized in that a space surrounded by said bottom  
3 and side wall of the recess of said land is  
4 frustopyramidal.
7. An LED device characterized by comprising:  
2  
3 an LED chip;  
4 an LED reflecting plate made of a metal and  
5 having a recess where said LED chip is to be mounted;  
6 and  
7 a printed wiring board on which said LED  
8 reflecting plate is to be mounted,  
9 wherein said printed wiring board comprises  
10 a first through hole in which the recess of  
11 said LED reflecting plate is to be fitted, and  
12 a terminal portion to be electrically  
13 connected to said LED chip.
8. An LED device according to claim 7,  
2 characterized in that said LED reflecting plate

3 comprises

4           a flat LED chip mounting portion which forms a  
5 bottom of the recess, and

6           a reflecting portion which forms a side wall  
7 of the recess and is inclined with respect to said LED  
8 chip mounting portion.

9.           An LED device according to claim 7,  
2 characterized in that said LED reflecting plate  
3 comprises

4           a plurality of lands each comprising the  
5 recess, and

6           a first bridging portion which connects said  
7 plurality of lands in series.

10.          An LED device according to claim 7,  
2 characterized by further comprising a thin metal wire  
3 which electrically connects said LED chip and said  
4 terminal portion,

5           said LED reflecting plate further comprising  
6 a flat flange around the recess, and

7           said printed wiring board further comprising  
8 a first substrate formed with the first  
9 through hole,

10           a second substrate which sandwiches, together  
11 with said first substrate, said flange of said LED  
12 reflecting plate the recess of which is fitted in the  
13 first through hole, and

14           a second through hole which is formed in said

15 second substrate and through which said thin metal wire  
16 connected to said LED chip on said LED reflecting plate  
17 is extended.

11. An LED device according to claim 7,  
2 characterized in that a plurality of LED chips are  
3 mounted on each recess of said LED reflecting plate.

12. An LED device according to claim 10,  
2 characterized in that said printed wiring board further  
3 comprises

4 an electrical connection hole formed in a  
5 portion of said second substrate which is above said  
6 flange, and

7 a wiring line which is formed on a surface of  
8 said second substrate and electrically connects the  
9 electrical connection hole to said terminal portion.

13. An LED device according to claim 7,  
2 characterized by further comprising a cooling member  
3 which comes into contact with a bottom of the recess of  
4 said LED reflecting plate.